

an anti-adhesive surface coating acting as a protective layer, wherein the coating contains at least one compound selected from the group consisting of fluoromocers, fluorine-containing silanes, polymeric fluorocarbon resins, and partially fluorinated polymers, and wherein the element is one of a sensor element and an actuator element, and the element includes an outer surface of at least one of silicon, silicon nitride, silicon dioxide, glass, metal and a ceramic, and wherein the anti-adhesive surface coating contacts the outer surface of the element.

REMARKS

Initially, Applicants would like to thank the Examiner for accepting the request to withdraw the finality of the Office Action dated July 9, 2002.

Additionally, to clarify the subject matter contained therein, claim 1 has been amended to recite that "the anti-adhesive surface coating contacts the outer surface of the element." It is respectfully submitted that this recitation is supported, for example, by the necessary implication of the phrase "surface coating," as well as by the Specification on page 2, lines 13-25, which state that the surface coating is a "protective layer" to be applied to "the surface of, for example, sensor- or actuator components . . . made of dielectric layers, such as . . . silicon, silicon dioxide, silicon nitride, silicon, glass, ceramics, polymers, or metals" Entry of the amendment is requested since it raises no new issues and puts the pending claims in condition for allowance.

I. REJECTIONS OF CLAIMS 1, 4-6, 8-10, AND 12-17 UNDER 35 U.S.C. § 112, FIRST PARAGRAPH

Claims 1, 4-6, 8-10, and 12-17 were rejected under 35 U.S.C. § 112, first paragraph, for allegedly containing

subject matter which was not described in the Specification in such a way as to reasonably convey to one skilled in the art that Applicants had possession of the claimed invention at the time the application was filed. Specifically, the Final Office Action contends that the original disclosure as filed does not support "[an] element [including] an outer surface of at least one of silicon, silicon nitride, silicon dioxide, glass, metal and a ceramic," as recited in independent claim 1. Respectfully, Applicants disagree and kindly request that the Examiner reconsider.

Applicants may show possession of the claimed invention by describing the invention with all of its limitations using such descriptive means as words, structures, figures, diagrams, and formulas that fully set forth the claimed invention. See Lockwood v. American Airlines, Inc., 107 F.3d 1565, 1572 (Fed. Cir. 1997). As explicitly stated in the original Specification as filed, "the surface of, for example, sensor- or actuator components [may be] made of dielectric layers, such as . . . silicon, silicon dioxide, silicon nitride, silicon, glass, ceramics, polymers, or metals" (See Specification, page 2, lines 13-19). Accordingly, it is respectfully submitted that the original disclosure supports "[an] element [including] an outer surface of at least one of silicon, silicon nitride, silicon dioxide, glass, metal and a ceramic," and as such, it is kindly requested that the rejection of claim 1 under 35 U.S.C. § 112, first paragraph, be withdrawn. Furthermore, to the extent that claims 4-6, 8-10, and 12-17 were rejected for depending from claim 1, it is kindly requested that the rejection of these claims be withdrawn for at least the same reasons.

**II. REJECTIONS OF CLAIMS 1, 4-6, 8-10, 12, 13, AND 17 UNDER
35 U.S.C. § 102(b)**

Claims 1, 4-6, 8-10, 12, 13, and 17 were rejected under 35 U.S.C. § 102(b) as being anticipated by Gruner. Respectfully, Applicants traverse.

Claim 1 relates to an element for use in a motor vehicle, including an anti-adhesive surface coating acting as a protective layer, in which the coating contains at least one compound selected from the group consisting of fluoromocers, fluorine-containing silanes, polymeric fluorocarbon resins, and partially fluorinated polymers, and in which the element is one of a sensor element and an actuator element, and the element includes an outer surface of at least one of silicon, silicon nitride, silicon dioxide, glass, metal and a ceramic, and in which the anti-adhesive surface coating contacts the outer surface of the element.

Gruner purportedly concerns a probe for measuring the flow rate and/or temperature of a flowing medium. In one embodiment, a resistor pattern is sandwiched between two thin sheets of heat-resistant synthetic polyimide resin. (See Gruner, col. 1, lines 40-54). The outer surfaces of the two sheets, which are made from a polyimide and a fluorocarbon, are further provided with a hydrophobic coating, such as hexafluoropropylene. (See Gruner, col. 1, lines 60-66; col. 2, lines 40-45). Contact areas 6, which are not coated with the hydrophobic coating, are left clear for the attachment of connection leads. (See Gruner, col. 3, lines 12-16).

To reject a claim based on anticipation, an individual reference must identically disclose each and every element as set forth in the claim. *Verdegaal Bros. V. Union Oil Co. of California*, 814 F.2d 628, 631 (Fed. Cir. 1987).

It is respectfully submitted that Gruner does not identically disclose an outer surface of at least one of silicon, silicon nitride, silicon dioxide, glass, metal and

a ceramic, in which "the anti-adhesive surface coating contacts the outer surface," as recited in claim 1.

The Final Office Action contends that "while a polymer coating covers some of the metal layer, Gruner explicitly teaches that part of the metal layer remains exposed At these exposed areas, the sensor would have an outer layer of metal, thus meeting the limitation added to claim 1." (See Final Office Action, page 5, paragraph 7).

Applicants recognize that contact areas 6 of Gruner are purportedly left free for connection leads. However, only the external surfaces of strips 1 and 2, which do not extend over contact areas 6, are provided with the hydrophobic coating. Thus, the hydrophobic coating of Gruner does not coat contact areas 6 and, as such, this reference simply does not disclose "an anti-adhesive surface coating [contacting] the outer surface," in which the outer surface is at least one of "silicon, silicon nitride, silicon dioxide, glass, metal and a ceramic," as recited in newly amended claim 1.

For at least these reasons, it is respectfully submitted that Gruner does not anticipate claim 1. Accordingly, it is kindly requested that the rejection of claim 1 under 35 U.S.C. § 102(b) be withdrawn, as well as the rejection of claims 4-6, 8-10, 12, 13, and 17, all of which ultimately depend from claim 1.

III. REJECTIONS OF CLAIMS 1, 4-6, 8-10, AND 12-17 UNDER 35 U.S.C. § 103(a)

Claims 1, 4-6, 8-10, and 12-17 were rejected as being unpatentable over Sugimoto in view of Gruner. Respectfully, Applicants disagree and kindly request reconsideration.

Applicants' invention, as recited in claims 1, 4-6, 8-10, and 12-17, is directed to an actuator element

having an internal sensor element provided with an anti-adhesive coating. In some embodiments, other parts of the actuator element may be provided with the anti-adhesive coating, in addition to the sensor element. These parts may include, for example, the inner walls of the gas or air supply channel of the actuator element and/or the measuring channel cover of the actuator element. (See Specification, page 5, lines 8-12). In this manner, the anti-adhesive coating serves to protect portions of the actuator element from contaminants.

Sugimoto purportedly concerns a fluororubber laminate for use in fuel hoses and fuel pump diaphragms, in which the fluororubber layer and an NBR layer are firmly bonded through vulcanization. (See Sugimoto, col. 1, lines 9-50).

The references used to support an obviousness rejection must be analogous prior art, i.e., either related to the same field of Applicants' endeavor or reasonably pertinent to the particular problem with which the invention is concerned. See In re Oetiker, 977 F.2d 1443, 1446 (Fed. Cir. 1992). Furthermore, to establish a *prima facie* case of obviousness of a claim, a combination of prior art references must disclose each and every element of the claim. See In re Vaeck, 947 F.2d 488 (Fed. Cir. 1991).

As regards Sugimoto, this reference is neither related to the field of actuator sensor element coatings nor reasonably pertinent to the protection of sensor elements from contaminants. Instead, Sugimoto is directed to the entirely unrelated field of fluororubber laminates for fuel hoses and fuel pump diaphragms. Thus, it is respectfully submitted that Sugimoto is non-analogous art and, as such, may not be used to support obviousness rejection of claims 1, 4-6, 8-10, and 12-17.

Independent of the above, Sugimoto fails to cure the critical deficiencies of Gruner with respect to claim 1.

Namely, Sugimoto does not disclose an anti-adhesive surface coating applied to an element including "an outer surface of at least one of silicon, silicon nitride, silicon dioxide, glass, metal and a ceramic, [in which] the anti-adhesive surface coating contacts the outer surface of the element." Therefore, Sugimoto and Gruner, whether considered individually or in combination, fail to disclose each and every limitation of claim 1.

For at least the foregoing reasons, it is kindly requested that the rejection of claim 1 under 35 U.S.C. § 103(a) be withdrawn, as well as the rejection of claims 4-6, 8-10, and 12-17, all of which ultimately depend from claim 1.

IV. CONCLUSION

Applicants respectfully submit that the present invention is new, non-obvious, and useful. Reconsideration and allowance of all pending claims is therefore earnestly solicited.

Respectfully submitted,

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VERSION WITH MARKINGS TO SHOW CHANGES MADE

IN THE CLAIMS:

Claim 1 has been amended as follows:

1. (Five Times Amended) An element for use in a motor vehicle, comprising:

an anti-adhesive surface coating acting as a protective layer, wherein the coating contains at least one compound selected from the group consisting of fluorormocers, fluorine-containing silanes, polymeric fluorocarbon resins, and partially fluorinated polymers, and wherein the element is one of a sensor element and an actuator element, and the element includes an outer surface of at least one of silicon, silicon nitride, silicon dioxide, glass, metal and a ceramic, and wherein the anti-adhesive surface coating contacts the outer surface of the element.

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